Marine Corps Seabasing Capabilities

Today and Tomorrow

17 November 2014
SEABASING CAPABILITY

LMSR
Military Sealift Command's (MSC) Large Medium Speed, Roll-On/Roll-Off ship (LMSR) program significantly expands the nation's sealift capability as a prime mover of US military equipment. The ships carry vehicles and equipment to support humanitarian missions, as well as combat missions.

LHA 8
Lifts and supports over 1200 Marines and the MAGTF command & control nodes—its main base to fixed (JSF), rotary wing/hit rotor, and unmanned aircraft systems. Well deck supports simultaneous landing craft operations. Level II medical capability.

JHSV
Provides high speed transportation for over 300 Marines and 20,000 sq ft of MAGTF equipment.

Ship to Shore Connector (SSC)
Provides modernized landing craft over-the-beach capability.

LPD-17
Capable of basing over 700 Marines, their equipment and supplies and projecting capabilities ashore with LCACs, conventional landing craft, amphibious connectors and rotary lift craft.

LSD
Provides largest capacity to operate landing craft in support of MAGTF operations.

Mobile Landing Platform
Leverages float-on/float-off technology and has raised vehicle platform, sideport ramp, mooring tenders and LCAC lanes. Utility of "Interoperable Pier in the Ocean" spans the range of military operations.

T-AKE
Offers selective access and offload of unitized supplies for prepositioning MEB and other MAGTFs operating in the sea base or ashore.

In future crises, forward based and forward deployed amphibious and MPF forces will continue to demonstrate their inherent flexibility and utility by aggregating with surged forces to conduct engagement, crisis response or forcible entry operations.

UNITED STATES MARINE CORPS
SEABASING CAPABILITY DEVELOPMENT FACTORS

- Close
- Assemble
- Employ
- Sustain
- Reconstitute
Amphibious Warships

- LHA 6
- LHA 8
- LHD
- LPD
- LSD
Maritime Prepositioning Capability

MPSRON 2
DIEGO GARCIA

- SISLER
- SEAY
- STOCKHAM
- LEWIS & CLARK
- BUTTON
- MONTFORD POINT

MPSRON 3
GUAM / SAIPAN

- DAHL
- PILILAAU
- LUMMUS
- SACAGAWEA
- WILLIAMS
- BOBO

% of MEB 30-day requirement
- Square feet: 71%
- 20-foot containers: 61%
- Fuel: 37%
- Water: 13%

% of MEB 30-day requirement
- Square feet: 67%
- 20-foot containers: 67%
- Fuel: 50%
- Water: 15%

Average squadron capacity is 69% of MEB square-foot lift requirement
Mobile Landing Platform (MLP)
Artist’s Conception...August 2009

- LMSR skin-skin moored alongside MLP
- Vehicles transfer from LMSR to MLP via side port ramp and onto LCACs
- LCACs maneuver forces ashore

34 berths
Skin-to-skin ramp and fenders

Utility Services (limited) for accommodation barges/modules

25,000 ft\(^2\) elevated vehicle stowage deck module

3 LCAC lanes with services

15 knots, 9,500 nm

FLO/FLO

Tankage capacities
100,000 gal Potable Water/
380,000 gal JP5
Mobile Landing Platform (MLP 1)
Reality...June 2014
Mobile Landing Platform (MLP 1)
Reality...June 2014
MPF T-AKE: Selective Offload

Plus Operational Reach
MLP 3 Afloat Forward Staging Base
USNS Lewis B Puller…May 2014

Keel Laying
November 2013
MLP Afloat Forward Staging Base (AFSB) Capabilities

- **Hangar**: 2 MH-53E Folded
- **Berthing**: 101 MILDET, 149 Embarked
- **Mission Deck Cargo**: Capacity: 4 MK 105 MCM sleds equiv & four 7-M RHIBs, 12 TEUs
- **Two Level I/Class 2 Operating Spots for MH-53E**
- **Tankage for**
  - 100,000 gal potable water
  - 380,000 gal JP5
- **15 knots, 9,500 nm**
MLP - AFSB Capabilities Comparison

MLP (MLPs 1 and 2)
- In-stream selective offload of Large, Medium Speed RO/RO (LMSR) in sea state 3 conditions
- Increased connector lift capacity
- Requires module augments for troop berthing & facilities

AFSB (MLPs 3 and 4)
- Maritime base of operations for MCM and SOF missions
- Accommodations and work spaces for up to 250 embarked personnel
- H-53 capable flight deck; pending V-22 certification
Connectors characterize the surface and vertical lift platform capabilities that are a critical component either organic to, or in support of, the sea base to transport personnel, supplies, and equipment within the sea base and maneuver them from the sea base to objectives ashore.

Derived From: Seabasing Joint Integrating Concept (JIC), 2005
# Connectors

**Surface & Vertical, Current & Future Platforms**

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<th>Surface Connectors</th>
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<th>Future/Possible Platforms</th>
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<td>USMC:</td>
<td>LCAC (SLEP)</td>
<td><strong>Programmed USMC:</strong></td>
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<td>LCU</td>
<td>SSC</td>
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<td></td>
<td>JHSV</td>
<td>SC (X)(R)</td>
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<td><strong>Emerging USMC Concepts:</strong></td>
<td>Connector at-sea launch</td>
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<td>US Army:</td>
<td>LCU-2000</td>
<td>Future US Army:</td>
</tr>
<tr>
<td></td>
<td>LSV</td>
<td>MSV-L, MSV-M, MSV-H</td>
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<td>Foreign:</td>
<td>LCM-8</td>
<td><strong>Prototypes/Demonstrators:</strong></td>
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<td>UHAC</td>
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<td>LCU-F</td>
<td>Hoverbarge</td>
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<tr>
<td></td>
<td>CAIMEN-90, CAIMEN-200</td>
<td>Designs:</td>
</tr>
<tr>
<td></td>
<td><strong>Air Supported Vessel</strong></td>
<td>LCU-F</td>
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</tbody>
</table>

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<tr>
<th>Vertical Connectors</th>
<th>Programmed USMC:</th>
<th>Emerging USMC Concepts:</th>
</tr>
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<tr>
<td>USMC:</td>
<td>CH-53E</td>
<td>Cargo UAS</td>
</tr>
<tr>
<td></td>
<td>MV-22</td>
<td></td>
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<tr>
<td></td>
<td>KC-130J</td>
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<tr>
<td></td>
<td><strong>Designs:</strong></td>
<td>Hybrid Airship</td>
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Surface Connectors

LCAC (SLEP)
- 60 ST at 35 kts
- Designed to carry M-60 tank
- Narrower performance envelope

LCU-1600
- <140 ST / 1200 NM at 11 kts
- 2200 sq ft payload cargo

SSC
- 74 ST at 35 kts
- Carries M1A1 with TWMP
- Full load in sea-state 3+ / 100F

SC(X)R
- Min 170 ST / 1200 NM at 11 kts
- Min 2200 sq ft payload cargo

Recapitalization of primary surface ship to shore connectors

Retains a high speed, OTH surface assault capability

72 craft procurement starting in 2013
IOC FY 20

32 craft procurement starting in 2018
IOC FY 22
**Joint High Speed Vessel**

**WPE/JHSV/HST Comparison**

<table>
<thead>
<tr>
<th></th>
<th>WestPac Express</th>
<th>JHSV POR: 10 Vessels</th>
<th>HST POR: 2 Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Length</strong></td>
<td>101m</td>
<td>103m</td>
<td>107m</td>
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<tr>
<td><strong>Draft</strong></td>
<td>4.3m</td>
<td>3.83m</td>
<td>3.7m</td>
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<tr>
<td><strong>Cruise/Max Speed</strong></td>
<td>36kts/38kts</td>
<td>35kts/43kts</td>
<td>40kts/42kts</td>
</tr>
<tr>
<td><strong>Passengers</strong></td>
<td>900</td>
<td>312</td>
<td>866</td>
</tr>
<tr>
<td><strong>Vehicle/Cargo Capacity</strong></td>
<td>33,000sqft / 165 HMMWVS</td>
<td>20,000-22,000sqft / 100-110 HMMWVS</td>
<td>31,000sqft / 152 HMMWVS</td>
</tr>
<tr>
<td><strong>Deadweight</strong></td>
<td>790t</td>
<td>700t</td>
<td>800t</td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>1250nm</td>
<td>1200nm</td>
<td>1200nm</td>
</tr>
</tbody>
</table>

**JHSV is not a combatant; operates in a permissive environment**

- Level I, Class 2 for H53/H60 helo operations
- Level I, Class 4 VERTREP operations
- Supports 312 troops for 4 days or 104 troops 14 days without replenishment
- Extensive, yet flexible crew & troop accommodations with lounge, medical, and mess facilities
- Crew-served weapon mounts fore and aft
- Large mission bay for range of military hardware, vehicles and boats; MTVR with trailer can do horseshoe turn
- 45° slewing articulated quarter ramp for rapid and efficient loading and offloading
Seabasing Related Doctrine

- **Marine Corps**
  - Marine Corps Reference Pub (MCRP) 4-11C, Combat Cargo Ops (Notes: 1, 2 [SID])
  - MCRP 4-11.3G, Unit Embarkation Handbook (1, 2 [SID])

- **Navy**
  - Navy Tactics, Techniques, & Procedures (NTTP) 3-02.12, Naval Beach Group (NBG) Support Element Ops (3, 4 [SID])

- **Naval / Dual Designated**
  - Marine Corps Warfighting Pub (MCWP) 3-31A / Navy Warfighting Pub (NWP) 3-02.12, Employment of LCAC (1, 2 [N], 4 [SID])
  - MCRP 3-31.2A/NTTP 3-15.24, Mine Countermeasures in Support of Amphibious Ops (1, 2 [N], 4 [FMID])
  - MCWP 3-31.5 / NTTP 3-02.1M, Ship-to-Shore Movement (1, 2 [N], 4 [SID])
  - MCWP 3-31.7 / NWP 3-62M, Seabasing (1, 2 [N], 4 [SID])
  - MCWP 3-31.8 / NTTP 3-02.1.4M, Defense of the Expeditionary Strike Group (1, 2 [N], 4 [FPID])
  - MCWP 3-32 / NTTP 3-02.3M, Maritime Prepositioning Ops (1, 2 [SID], 4 [N])
  - MCRP 4-11.3D / NTTP 3-02.14, The NBG (1, 2 [N], 4 [SID])

- **Joint / Multi-national**
  - JP 3-02, Amphibious Ops (1, 2 [N], 4 [SID])
  - JP 3-02.1, Amphibious Embarkation & Debarkation (1, 2 [SID], 4 [N])
  - JP 3-32, Command & Control for Joint Maritime Ops (1, 2 [N], 4 [SID])
  - ATP-8(B) Vol. I, Doctrine for Amphibious Ops (1, 2 [N], 4 [SID])
  - ATP-8(B) Vol. II, Tactics, Techniques, & Procedures for Amphibious Ops (1, 2 [N], 4 [SID])
  - ATP-24, MCM in Support of Amphibious Ops (1, 2 [N], 4 [FMID])
Doctrine Development
Benchmark Documents

- Seabasing Concept of Operations for Low to Mid Intensity Operations
- Joint Operational Access Concept (JOAC)
- Expeditionary Force 21
- MCWP 3-31.7 Seabasing
- EF 21 MEB CONOPS
- Disaggregated ARG/MEU Unit Concept of Employment
- Marine Corps Prepositioning Road Map 2025
- USMC Expeditionary Roadmap (2014 Draft)

Transitions to
Doctrine Development
Emerging Documents

- MLP - Prepositioning Wholeness CONOPS (Current draft (21 May 2014))
  - Afloat Forward Staging Base (AFSB) CONOPS (Initial Working Draft (~Secret~))

- MPF (SE) Seabasing Concept of Employment (Draft) ~ In AO level staffing, Target signature by Spring 2015


Seabasing....So What’s Next?
Near to Mid Term Possibilities

- Folding Hold Downs Actuated by Hydraulic Winch to Depress and LCAC Ramp Cable to go Up + Long Ramp Extensions

Images depict various military vehicles and maritime transport systems, including LCAC and INLS, showcasing advancements in naval warfare technology.
Possibility: Connector Station Ship

Sea Barge (SEABEE) Cape May with elevator in half-raised position

LCACs
SEABEE Barge Carrier SS Cape Mohican transports Navy Lighterage, LCAC, and Side-Loading Warping Tugs (SLWT) for Joint Logistics Over-The-Shore (JLOTS) 2008 Exercise.

Possibility: Connector Station Ship
Two improved Navy lighterage system (INLS) craft from Amphibious Construction Battalion 1 stand by to descend on the elevator of the Military Sealift Command SS Cape Mohican during Pacific Strike 2008.
Possibility: High Speed Assault & Interdiction Craft (HAVIC)

- Aluminum transporter landing craft designed and built in 1985-86 as part of AAAV AoA
- Tested with LAV in 1988 at Camp Lejeune
- LAV vehicle commander piloted the HAVIC via tele-operation
- Max speed at full load: 23.4kts in calm seas, 20kts in sea state 3
- Range: 80nm
- Stackable for transport & stowage
- Demonstrator scrapped in 1993
- Patent holder attended March 2014 Connector Summit & responded to Connector RFI
Seabasing: Assured Capability for Expeditionary Warfare

Amphibious Fleet

Carrier Strike Group & Expeditionary Strike Group

MAGTF

Connectors

Combat Logistics Force Ships

... mission drives organization

Coalition Force & Sister Service Ships

Maritime Prepositioning Force

Task organized forces to meet CCDR mission requirements
Seabasing Integration Division
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